

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-36 (Cancelled)

37. (Currently Amended) The A graft coated substrate of claim 34, the substrate comprising polyethylene, and a graft coating covalently bonded thereto, wherein said graft coating comprises a non-polyethylene polymer or copolymer and a flame retardant;

said graft coated coated substrate prepared by a process comprising:

applying a liquid composition to the substrate;

wherein the liquid composition comprises a monomer or prepolymer, a metal ion graft initiator, a peroxide catalyst, a polymerization promoter reactive with the monomer or prepolymer, and a flame retardant and

polymerizing the monomer or prepolymer to the substrate; and

wherein the process further comprises preparing the liquid composition by combining a Part A solution and a Part B solution prior to application to the substrate, wherein the Part A solution comprises:

(I) a monomer or prepolymer suitable for grafting to the substrate, in an amount ranging from 0.1 to about 50%, by weight of the liquid composition, selected from the group consisting of water-dispersed epoxy monomers, aliphatic moisture-curable urethanes, aromatic urethane prepolymers, silane prepolymers, vinyl and epoxy functional silanes and combinations thereof;

(ii) a metal ion graft initiator in an amount ranging from about 0.01 to about 1.0% by weight, relative to the weight of prepolymer or monomer in the liquid composition, selected from the group consisting of ions of silver, iron, silver, cobalt, copper and cerium;

(iii) a peroxide catalyst in an amount ranging from about 0.1 to about 5%, selected from the group consisting of hydrogen peroxide, an organic peroxide, and combinations thereof;

(iv) a flame retardant in an amount ranging from about 0.1 wt percent to about 10 wt percent of the solution, selected from the group consisting of chlorinated phosphate esters, melamine derivatives, oligomeric phosphate esters, bromoaryl ether/phosphate product, and phosphonates and; a compatible solvent or solvents;

wherein the Part B solution comprises a polymerization promoter.

38. (Previously Presented) The graft coated substrate of claim 37 wherein the polymerization promoter is selected from the group consisting of a polyfunctional aziridine liquid crosslinker and an aromatic polyisocyanate, in a concentration effective to react with, and crosslink, the monomer or prepolymer.

39. (Previously Presented) The graft coated substrate of claim 38 wherein the monomer or prepolymer comprises an epoxy moiety, and the Part B solution further comprises at least one epoxy hardener or curing agent.

Claim 40 (Cancelled)

41. (Currently Amended) The A graft coated substrate of claim 34, the substrate comprising polyethylene, and a graft coating covalently bonded thereto, wherein said graft coating comprises a non-polyethylene polymer or copolymer and a flame retardant;

said graft coated substrate prepared by a process comprising:  
applying a liquid composition to the substrate;

wherein the liquid composition comprises a monomer or prepolymer, a metal ion graft initiator, a peroxide catalyst, a polymerization promoter reactive with the monomer or prepolymer, and a flame retardant and

polymerizing the monomer or prepolymer to the substrate; and

wherein the graft initiator of the liquid composition is selected from the group consisting of ions of iron silver, cobalt, copper, cerium and combinations thereof in a concentration ranging from about 0.01 to about 1.0%, by weight, relative to the liquid composition..

42. (Previously Presented) The graft coated substrate of claim 41 wherein the graft initiator of the

liquid composition is a silver ion.

Claims 43-44 (Cancelled)

45. (Currently Amended) ~~The~~ A graft coated substrate of claim 34, the substrate comprising polyethylene, and a graft coating covalently bonded thereto, wherein said graft coating comprises a non-polyethylene polymer or copolymer and a flame retardant;

said graft coated substrate prepared by a process comprising:  
applying a liquid composition to the substrate;

wherein the liquid composition comprises a monomer or prepolymer, a metal ion graft initiator, a peroxide catalyst, a polymerization promoter reactive with the monomer or prepolymer, and a flame retardant and

polymerizing the monomer or prepolymer to the substrate; and

wherein the polymerization promoter of the liquid composition is selected from the group consisting of a polyfunctional aziridine liquid crosslinker and an aromatic polyisocyanate, in a concentration effective to crosslink the monomer or prepolymer.

Claims 46-55 (Cancelled)

56. (Previously Presented) A graft coated substrate, the substrate comprising polyethylene, and a

graft coating covalently bonded thereto, prepared by a process comprising the steps of:

- (a) contacting the substrate with a liquid composition comprising,
  - (I) a monomer or prepolymer suitable for grafting to the substrate, in an amount ranging from 0.1 to about 50%, by weight of the liquid composition, selected from the group consisting of water-dispersed epoxy monomers, aliphatic moisture-curable urethanes, aromatic urethane prepolymers, silane prepolymers, vinyl and epoxy functional silanes and combinations thereof;
  - (ii) a metal ion graft initiator in an amount ranging from about 0.01 to about 1.0%, by weight, relative to the weight of prepolymer or monomer in the liquid composition, selected from the group consisting of ions of silver, iron, silver, cobalt, copper and cerium;
  - (iii) a peroxide catalyst in an amount ranging from about 0.1 to about 5% by weight of the liquid composition, selected from the group consisting of hydrogen peroxide, an organic peroxide, and combinations thereof,
  - (iv) an effective amount of a polymerization promoter; and
  - a compatible solvent or solvents, and
- (b) grafting the liquid composition on the substrate.